REMARKS

Claims 1-16 are pending. No new matter has been added by way of the above amendments. For instance, claims 1-4 and 6-10 have been amended to recite correct Markush format and have also been amended to provide full recitation of any abbreviations used in these claims. New claims 11-16 are supported by page 4, line 25 to page 5, line 2 of the present specification. Accordingly, no new matter has been added.

In view of the following remarks Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Objections to the Claims

At page 2 of the outstanding Office Action the Examiner has outlined several objections to the claims.

First, the Examiner asserts that the abbreviations in the claims should be defined. Applicants have amended the claims to obviate this objection.

Second, the Examiner notes certain typographical errors in the claims. Applicants traverse and submit that the claims have been amended to obviate this objection.

Applicants submit that each of the objections to the claims have been dealt with in the newly submitted set of claims. Thus,

all objections are moot. Reconsideration and withdrawal thereof are respectfully requested.

Issues Under 35 U.S.C. §112, second paragraph

The Examiner has rejected claims 1-10 under 35 U.S.C. §112, second paragraph for the reasons recited at page 3 of the outstanding Office Action. Applicants respectfully traverse each of these rejections.

First, the Examiner rejects claims 1-10 for the failure to recite proper Markush language. Applicants traverse and submit that the relevant claims have been amended to recite correct Markush type language. Thus, this rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

Second, the Examiner has rejected claim 8 for the recitation of "significantly". Applicants traverse and submit that this term has been deleted from claim 8. Accordingly, this rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

Third, the Examiner has rejected the language "by identifying that said patient suffers from high blood triglycerides and high LDL levels" in claim 8. Applicants respectfully traverse and submit that claim 8 has been amended to clearly recite how each step is being carried out. Thus, this rejection is moot. Reconsideration and withdrawal thereof are respectfully requested.

Issues Under 35 U.S.C. §102/103

Applicants note that the Examiner has stated that the changes made to 35 U.S.C. §102(e) by the American Inventors Protection Act of 1999 do not apply to the present application. Applicants traverse and request that the Examiner take note that 35 U.S.C. §102(e) has been amended by "The Intellectual Property and High Technology Technical Amendments Act of 2002" (Technical Amendments Act). As amended by the Technical Amendments Act, 35 U.S.C. §102(e) must be applied to **all patent applications no matter when filed**. In other words, the revised statute applies to patent applications filed prior to the effective date of November 29, 2000 as well as to patent applications filed on or after November 29, 2000.

The Examiner has rejected claims 1-10 under 35 U.S.C. §102(e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Kosbab, United States Publication US2001/0031744 A1 (hereinafter referred to as Kosbab). Applicants respectfully traverse these rejections.

The Examiner asserts that the claims are drawn to methods of lowering a risk factor in a patient by administering a preparation comprising a licorice extract which is water insoluble and free from glycyrrhinzinic acid. Thus, the Examiner asserts that Kosbab allegedly discloses methods for lowering a risk factor in a patient by administering a preparation comprising a licorice

extract which is water-insoluble. Moreover, the Examiner asserts that the preparation of Kosbab appears to be free from glycyrrhinzinic acid. Applicants respectfully disagree with the Examiner.

The method of the claimed invention relates to the use of water insoluble licorice extract that is free from glyzyrrhizinic acid. Water soluble extracts, have been known for more than 3,000 years, and they are known to inherently contain glyzyrrhizinic acid. To illustrate the close relationship between licorice and glycyrrhizinic acid, Applicants point out that the latin name of licorice is *glycyrrhiza*, as may be evident, for instance, from the Merriam-Webster medical dictionary, network edition 1997, which reads:

> "glyc•yr•rhi•za
> *n.*
> 1. *cap* A genus of widely distributed perennial herbs or subshrubs of the family Leguminosae with odd-pinnate leaves, racemose or spicate flowers, and leathery often prickly pods **that include the licorices**
> 2. The dried root of a licorice of the genus *Glycyrrhiza (G. glabra)* that is a source of extracts used to mask unpleasant flavors (as in drugs) or to give a pleasant taste (as to confections) **called also *licorice; licorice root*.**" (emphasize added).

Furthermore, licorice extracts efficacy are usually attributed to the glycyrrhizinic acid contained in them, as

mentioned in the background of the invention (page 1 of the specification, lines 5 to 12).

Notwithstanding, the Examiner has asserted that "the reference [Kosbab] is silent of a preparation free from glyzyrrhizinic acid, thus, this suggests that the cited preparation is free from glycyrrhizinic acid" (See page 5 of the action, last line, and beginning on page 6).

Applicants assert that the Examiner's reasoning is flawed. Due to the close relationship between licorice and glyzyrrhizinic acid, a licorice extract would inherently contain glyzyrrhizinic acid, not be free from it. The Examiner's rejection is based upon a theory of inherency. As evidence that licorice extracts inherently contain glyzyrrhinzinic acid, and are not free from them, Applicants attach hereto three references. These references are as follows:

1. A first copy from the Merck Index 13th Edition, wherein under Entry No. 4518 one may find that glycyrrhizinic acid, the name used in the specification, is a synonym to glycyrrhizic acid (the name used in the main entry in the Merck Index) as well as to glycyrrhizin. One may also learn from the Merck Index that the compound was first obtained by extraction from *Glycyrrhiza glabra* which is licorice (as may be verified by Entry No. 4517 on the same page).

2. A copy of an article named Recent Research on Oriental Medicinal Plants ~~by Hiroshi~~ Hikino published in Economic and

Medicinal Plant research, Vol. 1, 1985, pages 53-85.) On page 59, last paragraph, it is stated that: "*Separation of the methanol extract led to a fraction (FM100) containing glycyrrhizin (13-19%)…*". From the context of the article, and especially from the headline of this section of the article: Glycyrrhizae Radix, it is clear that the extract referred to is a licorice extract.

3. A copy of an article named Licorice Ingestion and Blood Pressure Regulating Hormones, published in Steroids, 1994, Vol. 59, pages 127-130. On page 127, right column, it states: "… *Groen et al. and Card et al. noted weight gain and sodium retention when either a* ***crude licorice extract or a more refined preparation*** *of the active ingredients,* ***glycyrrhizinic*** *or glycyrrhetinic* ***acid****, was administered to patients…* " (emphasis added).

Based upon such evidence, it is apparent that licorice extracts inherently contain glyzyrrhinzinic acid. Thus, since Kosbab contains no statements regarding modifying the licorice extracts, Applicants respectfully submit that the licorice extracts of Kosbab also inherently contain glyzyrrhinzinic acid. Thus, no anticipation based upon the Kosbab reference exists.

Also, based on the disclosure of Kosbab, there is no motivation to remove the glyzyrrhinzinic acid from the licorice extract. For instance, Kosbab fails to suggest or disclose any steps for removing glyzyrrhinzinic acid from the licorice extract.

Thus, no *prima facie* case of obviousness exists based upon the Kosbab reference.

Additionally, at page 5, lines 3-4 of the outstanding Office Action, citing Kosbab at col. 11, lines 1-10, the Examiner states that Kosbab discloses "that combinations of the preparation include water-insoluble or hydrophobic [substances], having affinity to lipids." However, this phrase is taken out of context. Applicants request that the Examiner consult the entire discussion at col. 11, lines 1-10 of Kosbab, wherein it is disclosed:

> Different chemical types of antioxidants are combined to provide enhanced antioxidant effect. Preferred antioxidant combinations include both hydrophilic (having affinity for water or polar groups) and hydrophobic (having an affinity for lipids) antioxidants and combinations of antioxidants from different natural plant sources. In a preferred embodiment, antioxidant vitamins (vitamins C or E), the mineral zinc and different plant bioflavonoid sources are combined to achieve complementary and synergistic antioxidant effects related to microvascular protection and healing associated with diabetic complications.

Nothing in the above citation, or in the entire disclosure of Kosbab suggests or discloses the possibility that a licorice extract may be hydrophobic. Kosbab simply discloses that the composition may include a combination of hydrophilic and hydrophobic antioxidants. Thus, it cannot be concluded that a licorice extract is water insoluble.

Water soluble extracts of licorice are widely used, and as an example please refer to the Abstract of Document No. 3 recited

above, which states that: *"Revers reported that administration of a paste administered from succus liquiritiae,* ***a*** *dried* ***watery extract of the roots of Glycyrrhiza glabra*** *…".* This shows that watery extracts, which must be water soluble by definition, are in use. Therefore the recitation of a water insoluble extract should be considered as a limitation which is not inherently disclosed in the art.

Thus, Kosbab also does not inherently suggest or disclose a licorice extract which is water-insoluble. Thus, no anticipation, nor *prima facie* obviousness exists based upon Kosbab for this additional fact.

In view of the above remarks, Applicants respectfully submit that significant patentable distinctions exist between the present invention and Kosbab. For instance, Kosbab fails to suggest or disclose a licorice extract which is free from glycyrrhizinic acid. Moreover, Kosbab fails to suggest or disclose a licorice extract which is water-insoluble. Accordingly, no anticipation, nor *prima facie* obviousness exists based upon this reference. Reconsideration and withdrawal of the outstanding rejections are respectfully solicited.

Applicants have attached hereto a marked up version of the claims to show the changes made for the Examiner's convenience.

Pursuant to the provisions of 37 C.F.R. §§ 1.17 and 1.136(a), the Applicants hereby petition for an extension of one (1) month

to April 17, 2003 in which to file a reply to the Office Action. The required fee of $110.00 is enclosed herewith.

If the Examiner has any questions concerning this application, he is requested to contact Craig A. McRobbie, Registration No. 42,874 at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 

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Attachment:
(1) Version with Markings to Show Changes Made
(2) Excerpt from Merck Index, 13th Edition, Entry 4518
(3) Hikino, Economic and Medical Plant Research, Vol. 1, 1985, pp. 53-85.
(4) Steroids, 1994, Vol. 59, pp. 127-130

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Amended) A method for lowering a risk factor in a patient, [by] comprising

identifying that said patient suffers from said risk factor and

administering to said patient an effective amount of a preparation comprising licorice extract which is water-insoluble and free from glycyrrhizinic acid, wherein said risk factor is selected from the group consisting of blood pressure, blood glucose concentration, LDL (low-density lipoprotein) susceptibility to retention, LDL susceptibility to aggregation, blood total cholesterol and LDL levels, and blood [trygliceride] triglycerides and VLDL (very low-density lipoprotein) concentration.

2. (Amended) [A] The method according to claim 1, wherein said risk factor is selected from the group consisting of blood pressure, blood glucose concentration, serum LDL susceptibility to aggregation and serum LDL susceptibility to retention.

3. (Amended) [A] The method according to claim 1, wherein said risk factor is selected from the group consisting of blood pressure and glucose concentration.

4. (Amended) [A] The method according to claim 1, wherein said risk factor is selected from the group consisting of LDL susceptibility to aggregation and LDL susceptibility to retention.

5. (Amended) [A] The method according to claim 1, wherein said risk factor is blood glucose concentration.

6. (Amended) A method for treating inflammation in a patient, [by] comprising

(a) identifying that said patient suffers from inflammation; and

(b) administering to said patient an effective amount of a preparation comprising licorice extract which is water-insoluble and free from glycyrrhizinic acid, thereby treating said inflammation.

7. (Amended) A method for simultaneously lowering at least two risk factors in a patient, [by] comprising

(a) identifying that said patient suffers from said at least two risk factors; and

(b) administering to said patient an effective amount of a preparation comprising licorice extract which is water-insoluble and free from glycyrrhizinic acid, thereby lowering said at least two risk factors; wherein each of said at least two risk factors is selected from the group consisting of blood pressure, blood glucose concentration, LDL (low-density lipoprotein) susceptibility to retention, LDL susceptibility to aggregation, blood total cholesterol and LDL levels, and blood [trygliceride] triglycerides and VLDL (very low-density lipoprotein) concentration.

8. (Amended) A method for treating a patient suffering from high blood [trygliceride] triglycerides and high LDL (low-density lipoprotein) levels without [significantly] decreasing the HDL (high density lipoprotein) level[, by] of said patient, comprising

(a) identifying that said patient suffers from high blood [trygliceride] triglycerides and high LDL levels; [tsimultaneously lowering blood trygliceride and LDL levels,] and

(b) administering to said patient an effective amount of a preparation comprising licorice extract which is water-insoluble and free from glycyrrhizinic acid.

9. (Amended) A method for treating a patient suffering from a condition, [by] comprising:

(a) identifying that said patient suffers from said condition; and

(b) administering to said patient an effective amount of a preparation comprising licorice extract which is water-insoluble and free from glycyrrhizinic acid, wherein said condition is selected from the group consisting of aterosclerotic diseases, hypertension, cardiovascular diseases, chronic renal failure, carotid artery stenosis, coronary heart diseases, hypercholesterolemia, and hypertriglyceridemia.

10. (Amended) A method for preventing a patient from suffering from a condition, [by] comprising:

(a) identifying that said patient is in a high risk to suffer from said condition, and

(b) administering to said patient an effective amount of a preparation comprising licorice extract which is water-insoluble and free from glycyrrhizinic acid, wherein said condition is selected from the group consisting of aterosclerotic disease, hypertension, cardiovascular diseases, chronic renal failure, carotid artery stenosis, coronary heart diseases, hypercholesterolemia, and hypertriglyceridemia.

Claims 11-16 have been added.